Claims:

1. A checkpointing method of stabilizing a wireless communication systems during an upgrade of services, the wireless communication system having a primary controller comprising a first version of a control application, a secondary controller comprising a second version of a control application, and a checkpointing service, the method comprising the steps of:

operating the first version of a control application to control the wireless communication system;

saving state data in a first format, wherein the state data is representative of a stable operation of the wireless communication system, and wherein the first format of the state data is compatible with the first version of a control application;

utilizing the checkpointing service to save the state data to the secondary processor;

upgrading the second version of a control application;

quiescing the primary controller;

operating the upgraded second version of a control application to control the wireless communication system;

converting the saved state data from the first format to a second format, wherein the second state data format is compatible with the upgraded second version of a control application; and

operating the second version of a control application to control the wireless communication system, wherein the second version utilizes the converted state data to ensure wireless communication stability.

2. A method as defined in claim 1, wherein the wireless communication system further has a version control table containing the version number or the first version of a control application and the second version of a control application.

3. A method as defined in claim 2, wherein the step of upgrading the second version of a control application further comprises the steps of:

updating the version control table with the new version of the second version of a control application; and

comparing the version number or the first version of a control application to the second version of a control application to determine the second version of a control application has been upgraded.

4. A method as defined in claim 1, wherein the wireless communication system comprises a network element.

5. A method as defined in claim 4, wherein the network element is an element selected from the group consisting of a Base Transceiver Station (BTS), a Mobile Switching Center (MSC), a Base Station Controller (BSC), a Centralized

Base Station Controller (CBSC), a Radio Network Controller (RNC), a Gateway Switching Node (GSN), a Node B, and a mobile unit.

6. A checkpointing method of stabilizing a wireless communication systems during a downgrade of services, the wireless communication system having a primary controller comprising a first version of a control application, a secondary controller comprising a second version of a control application, and a checkpointing service, the method comprising the steps of:

operating the first version of a control application to control the wireless communication system;

saving state data in a first format, wherein the state data is representative of a stable operation of the wireless communication system, and wherein the first format of the state data is compatible with the first version of a control application;

utilizing the checkpointing service to save the state data to the secondary processor;

downgrading the second version of a control application;

converting the saved state data from the first format to a second format, wherein the second state data format is compatible with the downgraded second version of a control application;

quiescing the primary controller;

operating the downgraded second version of a control application to control the wireless communication system; and

operating the second version of a control application to control the wireless communication system, wherein the second version utilizes the converted state data to ensure wireless communication stability.

7. A method as defined in claim 6, wherein the wireless communication system further has a version control table containing the version number or the first version of a control application and the second version of a control application.

8. A method as defined in claim 7, wherein the step of downgrading the second version of a control application further comprises the steps of:

updating the version control table with the new version of the second version of a control application; and

comparing the version number or the first version of a control application to the second version of a control application to determine the second version of a control application has been downgraded.

9. A method as defined in claim 6, wherein the wireless communication system comprises a network element.

10. A method as defined in claim 9, wherein the network element is an element selected from the group consisting of a Base Transceiver Station (BTS), a Mobile Switching Center (MSC), a Base Station Controller (BSC), a Centralized Base Station Controller (CBSC), a Radio Network Controller (RNC), a Gateway Switching Node (GSN), a Node B, and a mobile unit.

11. An apparatus for ensuring wireless communication stability during an update of a wireless communication system, the apparatus comprising:

a first computer processor running a first version of control software, the first computer processor further having a first database capable of saving state data in a first version format representative of steady state operation;

a second computer processor running a second version of control software, the second computer processor further having a second database capable of receiving the state data from the first database in a second version format to replicate the steady state operation of the first computer processor;

a checkpointing service to transfer the steady state data from the first database to the second database; and

a control block to translate the steady state data from the first version format to the second version format.

12. An apparatus as defined in claim 11, wherein the wireless communication system comprises a network element.

13. An apparatus as defined in claim 12, wherein the network element is an element selected from the group consisting of a Base Transceiver Station (BTS), a Mobile Switching Center (MSC), a Base Station Controller (BSC), a Centralized Base Station Controller (CBSC), a Radio Network Controller (RNC), a Gateway Switching Node (GSN), a Node B, and a mobile unit.

14. A checkpointing method of stabilizing a system during an upgrade of services, the system having a primary controller comprising a first version of a control application, a secondary controller comprising a second version of a control application, and a checkpointing service, the method comprising the steps of:

operating the first version of a control application to control the system;

saving state data in a first format, wherein the state data is representative of a stable operation of the system, and wherein the first format of the state data is compatible with the first version of a control application;

utilizing the checkpointing service to save the state data to the secondary processor;

upgrading the second version of a control application;

quiescing the primary controller;

operating the upgraded second version of a control application to control the system;

converting the saved state data from the first format to a second format, wherein the second state data format is compatible with the upgraded second version of a control application; and

operating the second version of a control application to control the system, wherein the second version utilizes the converted state data to ensure stability.

15. A checkpointing method of stabilizing a system during a downgrade of services, the system having a primary controller comprising a first version of a control application, a secondary controller comprising a second version of a control application, and a checkpointing service, the method comprising the steps of:

operating the first version of a control application to control the system;

saving state data in a first format, wherein the state data is representative of a stable operation of the system, and wherein the first format of the state data is compatible with the first version of a control application;

utilizing the checkpointing service to save the state data to the secondary processor;

downgrading the second version of a control application;

converting the saved state data from the first format to a second format, wherein the second state data format is compatible with the downgraded second version of a control application;

quiescing the primary controller;

operating the downgraded second version of a control application to control the system; and

operating the second version of a control application to control the system, wherein the second version utilizes the converted state data to ensure stability.